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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,103

02/13/2004

Takahiro Yaguchi

Q79930

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23373

7590

08/22/2006

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EXAMINER

TAT, BINH C

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,103

Applicant(s)

YAGUCHI ET AL.

Examiner

Binh C. Tat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1,5,9 and 13 is/are rejected.
 7) ☒ Claim(s) 2-4,6-8,10-12 and 14-16 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 13 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 02/13/04.
 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application 10777103, file on 02/13/04.

Claim 1-16 remain pending in the application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 9, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Shouen Akihisa. (US Patent 5745371).

3. As to claims 1, 5, 9 and 13 Shouen Akihisa teaches a device for estimating the number of board layers constituting a board, which is connected to at least one file for storing information about an order of layers (see fig 15, fig 8) to be added, positional information of a component pin, a board pin (see fig 15), a power-source pin, and a ground pin, connection information between a component pin and a board pin, connection information between a power-source pin or a ground pin and a predetermined layer, information about existing wirings, information about an area where wiring is prohibited, and information about a shape of a via, a storage and an output device to which a wired result is output, comprising: a layer adding section for retrieving from the file the information about an order of layers to be added to form an original layer structure and to store information about the formed original layer structure in the storage (see fig 5, fig 6, fig 8, fig 9 fig 15 col 8 line 45 to col 10 line 22) ; a via forming section for retrieving from the file positional information of a component pin, a board pin, a power-source pin, and a

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ground pin, and connection information between a component pin and a board pin to store the information in the storage, and retrieving from the file the connection information from a power-source pin or ground pin to a predetermined layer and the information about a shape of a via to form a via and to store the information and information about the formed via with its shape in the storage (see fig 7, fig 8 col 9 line 45 to col 11 line 58); a wiring prohibited area forming section for retrieving from the file the information about existing wirings and the information about an area where wiring is prohibited to store the information in the storage (see fig 9, fig 14, fig 15 col 13 line 35 to col 14 line 67); and a wiring route searching section for searching for a wiring route in reference to the information stored in the storage to output to the output device a structure of a present board and the number of layers constituting the present board (see fig 9, fig 14, fig 15 col 60 line 35 to col 14 line 67 and summary).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh C. Tat whose telephone number is 571 272-1908. The examiner can normally be reached on 7:30 - 4:00 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Binh Tat
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August 12, 2006

Thuan
THUAN DD
Primary examiner
8/12/06